

46. The method of claim 45 wherein said animal cell is a mammalian cell.

47. The method of claim 45 wherein said bacteria is *Shigella*.

48. The method of claim 47 wherein said *Shigella* is *S. flexneri*.

49. The method of claim 48 wherein said *S. flexneri* is 15D.

50. The method of claim 47 wherein said cell is a cell of mucosal epithelium.

51. The method of claim 50 wherein said epithelium is intestinal mucosal epithelium.

52. The method of claim 47 wherein said *Shigella* is further inactivated.

53. A method for delivering DNA capable of being expressed in a mucosal epithelium cell, said method comprising:

- (i) introducing said DNA into a mutated strain of *Shigella* which is unable to synthesize active aspartate  $\beta$ -semialdehyde dehydrogenase of the DAP pathway; and
- (ii) administering the *Shigella* of (i) to a mucosal epithelium cell such that the *Shigella*, after uptake by said cell, will lyse, thereby delivering to the cell the DNA capable of being expressed therein.

54. The method of claim 53, wherein said mucosal epithelium is an intestinal mucosal epithelium cell.